

# India may see renewable hydrogen trade by 2025; 5 mil mt/year export goal ambitious: industry

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- **10% share of global trade goal 'ambitious'**
- **Export hubs seen in Gujarat, Tamil Nadu**
- **Rupees 50/kg renewable hydrogen subsidy seen**

**India's renewable hydrogen policy with a \$2.4 billion incentives package could enable trade by 2025-2026 but the 5 million-10 million mt/year renewable hydrogen export goal by 2030 looks ambitious, renewable hydrogen/ammonia developers said.**

India released its National Green Hydrogen Mission Jan. 14 with a support package aimed at making the country an electrolyzer manufacturing hub and garnering a 10% share of global renewable hydrogen trade by 2030.

**"Some small quantities of green hydrogen may be sold by 2025 assuming all the projects take off and all the commitments happen now," said Rajat Seksaria, CEO of ACME Group, a large renewable hydrogen/ammonia developer in India and the Middle East.**

**"Certainly 2026 onward seems to be more realistic, when a decent-sized offtake and real flow of electrons or molecules start happening," he told S&P Global Commodity Insights.**

In the long run, the 2030 target of 5 million mt/year of renewable hydrogen production and export was ambitious and would need more government interventions, said Vivek Singla, President, Green Hydrogen at ReNew Power, which also has renewable ammonia/hydrogen projects in the Middle East and India.

"Five million mt of exports by 2030 is definitely achievable with the right kind of support from the central and state governments," Singla said.

According to Singla, the government's stretch target of 10 million mt/year of renewable hydrogen production and exports may be for a longer time frame, beyond 2030.

The developers said India's had a low cost manufacturing advantage on the back of lower priced renewable power that would support renewable hydrogen/ammonia exports.

**Low costs of capital and labor in India were also supportive of a competitive hydrogen price, Seksaria said.**

On the Indian Energy Exchange, the Green Term Ahead market saw an average monthly price of Rupees 5,200/MWh (\$63.79/MWh) for solar power in December, up 3.79% from the previous month.

**"The present price of conventional ammonia is around \$1,000/mt. With the policy incentives, we will be significantly cheaper," Seksaria said.**

To some extent, India's export ambitions bank on its own slower energy transition, with the country taking advantage of buying interest from countries with 2050 net-zero targets -- ahead of India's own 2070 commitment.

India's export hubs are expected to be in the industrialized states of Gujarat, Tamil Nadu and Maharashtra, all of which have major ports.

S&P Global's Hydrogen Production Assets database shows India has 54 renewable or low carbon hydrogen projects with a combined projected capacity of 1.99 million mt/year. For comparison, Australia has 130 projects with a projected capacity of 10 million mt/year. The Platts Hydrogen Price Wall showed Victoria, Australia, had the lowest grid-based electrolysis hydrogen production costs in December, averaging \$1.74/kg (alkaline electrolysis). The UK had the highest at an average of \$32.41/kg (PEM electrolysis).

### **Subsidy deployment**

While details on the deployment of India's \$2.4 billion incentives package are awaited, industry members hope a material share of the funds will be channeled toward the end product itself, boosting competitiveness in the export market.

"The government is [likely] proposing a subsidy of Rupees 50/kg (61 cents/kg) for green hydrogen in the first year, then Rupees 40/kg and Rupees 30/kg in the second and third years," Singla said.

"We have conveyed that this Rupees 50/kg subsidy should continue for the life of the projects, that is, 25 years, otherwise the total impact of the proposed subsidies would be miniscule," he said.

Singla also called for the removal of duties and taxes on hydrogen, electrolyzers and the renewable energy assets supplying power to electrolyzers.

Market participants said the generous tax credit regime under the US' Inflation Reduction Act, providing up to \$3/kg subsidies for clean hydrogen production, could be available into the 2040s.

### **Solar type auctions**

For domestic consumers of hydrogen, the market expects renewable hydrogen auctions along the lines of India's renewable power auctions, seen as a tried and tested method of bringing production forward.

For years the Solar Energy Corporation of India has held reverse auctions of wind and solar power.

The country's first hydrogen offtake agreements were expected by Seksaria this calendar or financial year, with projects commencing production of renewably hydrogen "in the next two to three years."

Globally, some 23 million mt/year of new clean hydrogen production capacity projects were announced in 2022, according to S&P Global's latest Hydrogen Market Monitor, published Jan. 10. This takes the global hydrogen project pipeline to 67 million mt/year.